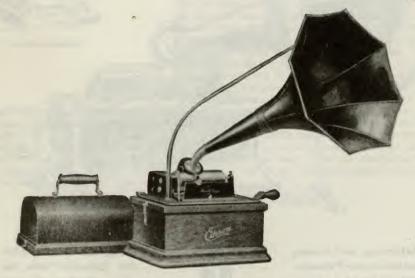
# The Hillandale News



No. 108 JUNE 1979



EDISON FIRESIDE PHONOGRAPH, 1909

Sydney Carter has sent us this picture of the FIRESIDE, showing it as it appeared in the Edison catalogues when it first appeared in 1909. The Fireside was a sort of cross between a STANDARD and a GEM, and was a combination model (for two-minute and four-minute cylinders) from its inception until late 1912, when the FIRESIDE Model B appeared, which played Amberols only. The Fireside horn was maroon in colour, with a threaded joint at the base of the petalled section; it was also used on the popular 'red' Gem. For further information, see our President's book "The Edison Cylinder Phonographs'.

### HEADENEE

# ANTON ATHAN

2THTPATR

Grosshandlung von Sprechmaschinen

BERLIN SW. 68, Ritterstrasse 44

Special-Grossist für "Columbia" BC Starktonmaschine Special-Grossist für "Apollo"-Hartguss-Records 🗪 🖂 Special-Grossist für "Sauerlandt"-Blancs 🖘 🖘 🖂 Grossist in Zonophon-Artikeln Grassist ın Lindström-Apparaten



Lieferung mit einzig dastehender Promptheit www ww

Meine riesige treue Kundschaft ist der best. Beweis für diese Tatsache N N N N



Columbia B C Starktonmaschine

Billigst. Bezugsquelle für Zubehörteile zu allen Systemen von Sprechmaschinen N

"Gut, prompt und billig" ist meine Devise n n n n n

### Chairman's Chat

An interesting aspect of the Editor's job is the correspondence he receives from members all over the world. This is perhaps unfortunate in one way when the Editor happens to be yours truly, because I am not one of those people who get all their letters answered by return. This is more so now than ever, as my work seems to be increasing exponentially, like a Re-entrant horn, in all directions at once, and I am finding that all I have the energy for in the evenings is sitting in an armchair. Anyone patiently waiting for a reply to a letter of several weeks ago, please forgive me — it's not just the Postal strike.

Now you might deduce from that bit about the armchair that I am a lover of quiet domesticity, and you would be right. Perhaps that is why I like gramophones — not necessarily obscure machines designed to look like windmills or beer-barrels, or playing chocolate records, or made in pseudo-Chinese Chippendale side-boards for the Managing Director's mother-in-law — just the ordinary, everyday sort of gramophones that graced the average middle-class household in the two generations immediately preceding my own. I am not particularly keen on coin-slot models, although I am intrigued by their mechanisms, and I wouldn't have a juke-box in the house for all the tea in China — well, perhaps I might, it would take up less room. In current

jargon, it is all a matter of what 'Turns you on'.

I do not, therefore, take sides in the old argument about who invented the phonograph, or whether Edison is more worthy of veneration than Berliner. Among my recent correspondence was a letter on the latter topic from an overseas member who takes Edison's part in no uncertain terms. For him, it is the scientific aspect that is all-important, and there is rather more science displayed in Edison's machines and recording methods than in Berliner's. To some extent, I go along with this view, for there is no doubting the superiority of Edison's acoustic recording over that of his rivals, and the use of a permanent sapphire certainly seems more scientific than a steel needle. However, it occurred to me that Berliner provided a form of record that could be mass-produced over ten years before Edison did (there is nothing very scientific about singing the same song ten times into ten recording horns to get 100 rather delicate wax cylinders); furthermore, although my correspondent speaks scornfully of the acid-etched Berliner records, they were rather more effective than Edison's tinfoil. Nor could I accept a suggestion that Berliner 'purloined' the wax recording method from Edison; for what did Edison do, if he didn't 'purloin' wax recording from the Graphophone people?

I would not presume to make dogmatic rules governing what is or is not worth collecting; if you collect Edison cylinders alone, on the grounds of their theoretical superiority, then that is fine, but I would be equally happy for you to collect G. & T. discs on account of their greater wealth of worthwhile music, however inferior the recording and you might indeed collect discs for no better reason than that you liked the different colours of their labels, or were interested in the methods used to promote their sales. These are different and sometimes contradictory aspects of the subject, and these differences all help to contribute towards the pleasure and interest of belonging to a society like ours.

<sup>←</sup> This is the first of a number of illustrations from the 'Phonographische Zeitschrift' which have been kindly loaned to us by Dieter Hellauer of Munich. The quality of reproduction may not always be as good as we would like, as we are working from copies of the originals, and in places the margins have been cut off. However, some very interesting and unusual machines are shown, and we hope you will agree they are well worth showing. In this issue, we show items from 1907.

# **Obituary**

It is with deep regret that I have to report the death in April of our former Editor, Bill Brott. As I have mentioned previously, Bill had been ill for some time, and he will be sorely missed at the London meetings, which he attended regularly.

Bill took over the Editorship in 1972, and held the post until the end of 1978. Unlike his successor, he was a professional, working in the publishing world and having considerable artistic abilities. As a collector, his main interest was in operatic recordings, both on cylinder and disc, but he had a sense of humour and was not too proud to collect more lighthearted subjects like crested china gramophones.

I would like, once again, to record the Society's gratitude to Bill for his work for the Hillandale News over the past six years, and to add our condolences to his widow, Kit, whom it was our occasional pleasure to meet when she accompanied Bill to Society meetings.

### Vice-Chairman's Chat

Well, we are now in our sixty-first year, and I think we concluded our sixtieth on a very good peak. The April magazine was the largest we have ever produced; the spares and reprint list was the most comprehensive; we are reaching the highest membership ever; and the Almanac has more and more programmes pushed into it with each issue, which shows how much activity there is in the U.K. There must have been something to interest everybody in the April magazine as it covered a vast range of subjects. I hear that all the regional branches are enjoying larger gatherings at most of their meetings, and I know this is true of the London meetings, where the average attendance has increased by 80% in the last year. This may, of course, be due to our change of venue; our present accommodation, at the Bloomsbury Institute, is most satisfactory and includes facilities for a tea-break. Most of our members seem to be TT, or at least have no yearning for a pint of Best at West End prices. I like to think that the Almanac has also helped by reminding members that a meeting is due. We have had some first class speakers, who have held audiences enthralled for up to two hours, as the reports have shown. See you at the next meeting!

If you live within Tuning distance of Radio Solent you should listen on Monday evening at 6.00 p.m. to the news and leave the radio on until 6.40 p.m. during which time you will hear a programme called "79, 78 Show". This is presented by Jeff Link. He spends some time before the programme is recorded in his attic blowing the dust off some electrically recorded 78's, compiling them into a sequence with linking talk, giving a limited amount of detail on each record. He plays a couple of requests, and if there is a special request for which he cannot himself supply the record he will obtain it from the BBC Library in London. About midway in his programme he will stop to tell of a listener's experiences or play some special piece on his 'vintage spot'. The programme I heard last week had him playing Peter Dawson and Ernest Pike, "The Old Rustic Bridge" on Wax Amberol 12006. He used an Edison Fireside with "H" Repro and Cygnet horn. The whole thing was light-hearted with something for all 78 and vintage record lovers.

# Future meeting reminder

#### LONDON PROGRAMMES

June 6th Barry Raynauld, short talk, The concept of the Phono,

and Timothy Massey, Record recital

July 4th Joe Pengelly, of BBC Plymouth, Electrical reproduction of cylinders

The above dates are for programmes on Wednesdays at the Bloomsbury Institute.

The following are for programmes on Saturdays at The Eccentric Club or at Debenhams, Oxford Street. See almanac for final details or contact the officers.

August 4th Dave Roberts, "Comparing Reproducers", using 12 Phonographs

September 1st Leonard Petts, The Birth of the International Red Label 1900-1903

October 6th Annual General Meeting, plus two short programmes

Country members, see note below.

Country or Foreign members — If you are interested in giving a short programme after the annual general meeting will you please contact Dave Roberts. We are looking for a short recital or lecture, about 45 minutes, to cheer us up after the headaches of choosing committees etc. during the afternoon.

### The Vertical-Cut Disc Record

(Adapted from a lecture-recital compiled by Len Watts and Frank Andrews and presented by the former at the London meeting on March 7th 1979)

Although Pathé and Edison were the two biggest makers of vertical-cut (or phono-cut) disc records, there were many others during the early years of the gramophone industry. Vertical-cut recordings were played with a round-pointed jewel-tipped needle, which was semi-permanent. Apart from doing away with the annoyance of constant needle-changing, the advertisements claimed that the jewel was unwearable, that the records lasted longer (in some cases ten times as long as other makes) and that the ball-point "glides freely, smoothly, sweetly along its course" (quote from Pathé). In fact, time has proved that in many cases the records wear rather badly compared to their needle-cut contemporaries.

#### **TOY GRAPHOPHONE**

The first vertical-cut disc records to be put on sale in Britain were the small wax discs on the toy Graphophone, a children's hand-operated model made by Columbia before that company

# Phonographe à Disques PATHÉ



### Prix: 100 Francs

L'appareil comprend :

Une boite vernie système à charnières ;

Un bras acoustique:

Un pavillon fleur recourbé nº 520 de 30 % de diamètre :

Un reproducteur à saphir inusable pour disques Pathé.

NOTA: Le bras acoustique améliore les sons et les rend plus mælleux et plus agréables à l'oreille sans diminuer l'intensité, il permet en outre de diriger l'owerture du pavillon dans toutes les directions sans déplacer l'appareil. became associated with the shellac-based needle-cut Climax records. The wax discs and Graphophones had been on sale in America in 1899, but because of patent restrictions Columbia could not operate in Britain until May 1900. The Edison-Bell Consolidated Phonograph Co. Ltd. and Edisonia Ltd. or any of their licenced dealers could have sold these vertical-cut records earlier. The discs were about 4½ inches in diameter with a large centre-hole of 7/8" diameter and were of cream-coloured wax.

#### **STOLLWERCK**

About 1898 a German firm, Gebrüder Stollwerck A.G., who made chocolate and other confectionery, also coin-operated self-service machines, acquired the Edison patents for Germany, but appear to have done little with them until about 1903 when they produced a disc phonograph similar to the Columbia Children's Graphophone, but with a spring-driven motor. The records sold with this machine were vertical-cut and were made of chocolate covered with metal foil, and could of course be eaten after being played.

There were also produced some discs made from a compressed material with a surface of a proprietary compound suitable for receiving the impression of the master stamper.

#### **NEOPHONE**

In October 1904 Dr. William Michaelis launched his Neophone machines and his Neophone Disc Phonograph Records which were vertically cut. The first Neophone discs were made of compressed cardboard, and coated with white enamel on one side only, to receive the impression from the stamper. The first records were 7½ inches and 10-5/8 inches diameter (19 and 27 cm) but in March 1905, 9-inch and 12-inch records were put on sale (23 and 30 cm) later to be joined by a 20-inch disc (50 cm). Grand Opera discs were sold, some bearing the artists' autographs, and the prices ranged from sixpence to ten-and-six.

In June 1906 a new type of Neophone record appeared, being double-sided and made of a black composite material called Neolite. Some former white enamel discs were coupled and pressed in this new material, the new discs being 12-inches in diameter and costing three shillings. By January 1907, only the Neolite discs were being advertised, when Neophone Ltd. was put into the hands of a receiver and manager.

#### PATHÉ

In October 1906 the big Pathé company announced its Pathé Discs in London. However there was a delay in the delivery of the new centre-start discs and they were not on sale until December, just at the time the Neolite Neophone discs were in great financial difficulties. Pathé completely abandoned their cylinder business, which had been running in London since 1902, and concentrated on their 11-inch (28 cm) single-sided discs, which were mostly dubs from the master cylinders which had been in use for their former cylinder trade. Price was 3 shillings each.

#### WHITE

In February 1907 James H. White, managing director of The General Phonograph Co. Ltd., makers of the White cylinders, announced that he was to place on the market a new disc record of vertical cut, to be made by the gold-moulded process.

The records had not appeared in England by May 1907 and although 25 should have been issued in June, they didn't appear. In July The General Phonograph Co. Ltd. bought-out the

Neophone business, promptly abandoned the White Record as such, and renamed their disc records "Neophone Disc Phonograph Record, System White". These new discs were made by James H. White's gold moulded process.

In the same month, July 1907, Pathé put out their 8½-inch "Popular" double-sided discs, and the 11-inch discs became double-sided and were called De Luxe. Prices for these two sizes were 1/6 and 4/- respectively. Most of the first issues of these small discs were duplicates of the 11-inch repertoire, the smaller discs having finer grooves.

#### **MUSOGRAM**

By November a list of Musogram records, vertically-cut and a full 12 inches diameter (some others had been only 11½ or 11½ inches) was received by the London office of The Talking Machine World of the USA. Musogram Limited, of Denmark Place, Charing Cross Road, was a company begun by three ex-officers of Neophone Ltd. in July 1907. One of the directors was Percy J. Packman, ex-chief recording expert for Neophone in London. Except for the mention of a machine catalogue and the availability of a record list in October 1908, nothing was heard of these discs in trade periodicals until April 1909.

#### 1908

1908 was a big year in the vertical-cut disc story. In April the General Phonograph Co. Ltd. resolved to wind-up and the Neophone System White discs disappeared.

In August Pathé Frères announced 160 new titles in the 8½-inch "Popular" series. All these new titles were transfers from the defunct Sterling gold-moulded cylinder records, Russell Hunting having left the Sterling business to join Pathé. Russell Hunting had become famous for his Michael Casey sketches, and was a recording expert.

In the same month Edison Bell announced their vertical-cut "Phona Disc", double-sided and 8½ inches or 8¾ inches according to which advertisement you read! An 11-inch or 12-inch disc called "The Marvel" was announced but never appeared. There was a disastrous fire at the works in December 1908, but the smaller Phona Discs did appear in November 1908.

Another vertical-cut disc of similar name also appeared one month earlier, i.e. October 1908. This was the Phono Disc, 11-inches diameter, double-sided and 4/- each (same price as Pathé). These Phono Discs were under the proprietorship of Lacroix & Co. of Jewin Street, London, and of Paris. This company already had a list of British artists when they launched their discs, among whom were Wilfred Virgo, tenor, William Warwick baritone, W. G. Webber bass, Roger Parker Scots comic, Owen Way comic, Pete Brown Coon songs, Monsieur Cras violin, and The Phono Military Band.

These discs were advertised as the Sapphire Phono Disc by the Filamentophone Co. Ltd., who said of the discs that they were "A revelation to all who hear them. Loud! Sweet! Clear!! No more muffled music when you play these."

In November Pathé Frères announced a 10-inch disc, a few of which were also of former Sterling cylinder recordings. Actually they were 24 cm diameter, just under 9½ inches.

In December the Premier Manufacturing Co. Ltd. announced their vertical-cut Clarion records, so, by the end of 1908, vertical-cut discs available in England were three sizes of Pathé, the Musograms, Phono Disc, Edison Bell Phona Discs, and Clarion Records.

In April 1909 Pathé Frères announced that they were to issue 20-inch discs. Demonstrations were given during the next few months and the discs eventually went on sale in September at 12/6.

In December two new vertical-cut discs came on the market. One was the Ebonoid Five-Minute Record, made by the Premier Manufacturing Company Ltd., and was a finely-grooved double-sided 10-inch disc of allegedly 5 minutes duration, two minutes longer than a needlecut disc.

The other was the Aspir of 11 and 12 inches diameter selling at 3/6 and 3/9 respectively. It was a product of the *Compagnie Générale d'Electricité* of Paris, and the label style was etched like Pathé, Aspir being an anagram of Paris. As far as is known, no British artists appeared on this label.

Also in December 1909 Musogram Ltd. advertised a long-playing record, the Musogram Long Process Record, the 12-inch priced at 4/- and playing for 8 minutes and the 10½-inch disc for 5 minutes. In January 1910 Musogram Living Records began selling at 3/-.

In America the Edison business started making their first Diamond Disc masters, to be followed by The National Phonograph Co. Ltd., at Willesden Junction in August. In spite of this early work the Edison vertical-cut discs were not put on sale in America until late 1912, due to delays in designing suitable machines. The machines and records were on sale there early in 1913, but they did not appear in England until after the Great War, except where specialist importers made supplies available.

In November 1910 Pathé announced a 14-inch disc selling at 6/-, and J. E. Hough Ltd. at their Edison Bell Works brought out the 9-inch Little Champion record made from a new material "Vitaroid".

#### **AEROPHONE**

In September 1911 a new vertical-cut disc began to sell from 50 High Holborn. This was the Aerophone Disc, 10-inches diameter and double-sided, advertised as playing as long as a 12-inch disc. The headquarters of the company was in Paris and there was already a large repertoire in their catalogue.

#### **MARATHON**

Another announcement of September 1911 was of a new vertical-cut disc from The National Gramophone Co. Ltd., which had been formed two months earlier. These records were to have a groove-form cut under a new principle invented by Percy J. Packman (whose Musogram business had failed).

These new discs were to play at 80 r.p.m., and were to have a recorded track vertically-cut, but V-shape instead of the usual U-section in general use for hill-and-dale recordings. The new discs were not named as yet, but were to be played with a steel needle instead of a sapphire. The records were to be 10-inches and 12-inches diameter and were to sell at 2/6 upwards. The first issues were to be on sale within two weeks of the announcement, but they did not appear.

The National Gramophone Company's discs eventually went on sale in July 1912 as Marathon Records. The Marathon soundbox at 5/- was offered to enable ordinary gramophones to take the new discs. In November the 12-inch disc appeared priced at 4/-.

#### PARES

From France another new disc appeared. This was the Gabriel Parès which was available as vertical or needle-cut. Gabriel Parès had been musical director of the Garde Républicaine Band for some twenty years. The label bore a photographic likeness of him and the wording "Musique de la Garde Républicaine", as all recordings were by this band and its soloists. The discs were 28 cm diameter and cost 3/6. The phono-cut version had to be specially ordered. The first issues comprised some 200 titles and were on sale from an agent at 15 New Oxford Street, London, and a company named Warroners Ltd. was in course of registration to handle the business. In March 1915, only 2½ years later, Warroners Ltd. stated that all Gabriel Parès discs would be sold under the name Warroner Record.

#### DIAMOND

In January 1915 the first of the Diamond Double Disc records were issued. They were 10½ inches diameter, double-sided and made for the Diamond Disc Record Ltd. by Pathé Frères. Unlike Pathé discs, the Diamonds were edge-start, but like Pathé they had no paper label, the necessary information being inscribed in the centre of the disc and filled with blue paint.

The first list of Diamond Double Discs contained 250 titles and the Diamond soundbox sold for 3/6 to fit any type of gramophone. In February, Denville Simons, addressing the West London Society, admitted that his company was trying to emulate the Edison Diamond Disc on sale in the USA, with an inferior material, but at a cheaper price. He also demonstrated his discs and Edison's to the Northants Society.

1916 saw the Diamond Disc Record business taken over by Pathé Frères. Many of the issues had been taken from Pathé masters anyway, although there were quite a number of new recordings. Both the Pathé recordings and the new ones were given master numbers, which can be found at 6 o'clock on the label, but towards the end of the Diamond series, a printed paper label was attached, which had the wording "Pathé Diamond Record", and had Pathé master numbers.

#### **VOCALION**

In February 1917 The Orchestrelle Company took recording rooms in Chiswell Street, London, and there recorded vertical-cut discs for the American market, to sell as Vocalion Records. Some of you may have seen and heard an Orchestrelle. It is a large reed-organ played by paper rolls. The recording experts for these Vocalion records were Percy J. Packman, late of Marathon Records, and a Mr. Quick or Quirk late of Pathé Frères. As far as is known these vertical-cut Vocalions were never sold in England. The Orchestrelle Co. Ltd. later changed its name to The Aeolian Co. Ltd. Many of you will have seen Aeolian Vocalion records which were needle-cut, and those of you with an interest in player-pianos will be familiar with the Aeolian player action.

#### **EDGE-START PATHES**

Pathé Frères had been equipping a factory at West Drayton, and had promised edge-start 80 r.p.m. discs for the 15th November 1917, but there was a delay until February 1918. The new "Rooster" records as they were called were to have a paper label bearing the famous Pathé Cock, which was to be coloured white, red or gold to denote price category (4/6, 6/6, 8/6). They were allegedly 12-inches diameter (actually they were only 28 cm, same as the centre-start records) and had the wording "Pathé Disc" around the top of the label. The 10½-inch discs

continued as Diamond, and in the catalogue for November 1918 both Diamond and Rooster discs are listed.

Most of the recordings were transfers from centre-start discs, but a few, notably of the pianist Edouard Risler, were new recordings. Rooster discs were in many cases very shoddily made.

Pathés abandoned the Rooster and Diamond labels in September 1919, and with the floating of a new company, Pathé Frères Pathéphone Ltd., brought out a new label called the "Scroll". These had a red cock, and the title was enclosed in a representation of a parchment scroll, which was coloured black, red, buff, blue or white to denote price category (4/6, 6/-, 7/-, 10/-, 12/6). In the centre-start era Pathé records had been priced according to diameter, not the artist. Here again many issues were dubs from centre-start discs, but many new recordings did appear. Some of the dubs were from very old recordings, and I believe in one case (Carrie Tubb I think) Pathés were in legal trouble over re-issuing old and inferior recordings.

The Scroll records were called 10 and 12, but here again the 12 was only 28 cm. The first 10's were Diamond Discs with Pathé labels stuck over, but the later 10-inch issues had the normal pressed-on label.

#### **EDISON DISCS**

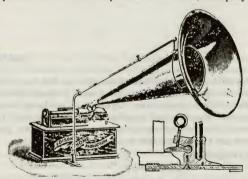
In the Spring of 1920, after the lifting of wartime restrictions, Edison Diamond Discs, now called Edison Re-Creations, began to be advertised by dealers. All discs were 10 inches diameter. In August 1927 the London & Provincial Phonograph Co. advertised the Edison Long-playing records and gave public demonstrations.

In November 1928 the Pathé company amalgamated with the British Columbia business and the Pathé vertical-cut discs ceased to exist as far as this country was concerned. Actually no new Pathé records had been issued since May 1927.

October 1929 saw the shut-down of the Edison company in America, so this would seem to be the end of the vertical-cut record in the UK. I believe Pathés soldiered on in France with the vertical-cut disc until 1932.

However, the vertical-cut in modified form reappeared with the advent of stereophonic records. As you probably know, the stereo groove consists of two vertical-cut tracks, placed at right-angles to one another, and at 45 degrees to the record surface.

One type of disc where true vertical-cut is still used is in talking dolls and other automata. These are rather small plastic discs with a special drive-hole, and play only a few seconds.



Method of attaching a crane for a large horn to the Edison Home phonograph (1907)

# Report of the April Meeting at the Bloomsbury Institute

This was one of those occasions when we were treated to a visit by one of the top names in the Talking Machine world. When I first approached Mr. Chew last year about the possibility of his giving us a talk, he was reluctant to do so, and suggested making a tape recording for us. We were all the more delighted that he was able to appear in person.

Mr. Chew illustrated with numerous slides a narrative in which the story of the development of the Science Museum from 1855 to 1928 was linked with the adventures of Edison's original

phonograph, which was for nearly fifty years one of its more important exhibits.

The stories had three heroes, the first being the Prince Consort, whose enthusiasm for the application of art and science to industry played a large part in bringing about the Great Exhibition of 1851 and establishing the South Kensington Museum on land bought with the profits of that exhibition. The second hero was Bennet Woodcroft, who was largely responsible for the British Patent Office becoming a model for Europe and whose initiative led to the establishment of the Patent Office Library and the Patent Office Museum. The third hero was Thomas Edison, whose phonograph of 1877 was secured in 1880 by an official of the Patent Office Museum, and passed in 1882 to the South Kensington Museum and thence to the Science Museum when it became independent.

In the last part of his talk Mr. Chew discussed the efforts made from 1922 onwards to have the phonograph returned to the USA, which efforts eventually involved the British Ambassador in Washington, the Foreign Secretary and the President of the Board of Education. The contention that the phonograph was lent rather than given in 1880 was not accepted by all concerned, but all agreed that the instrument should be returned 'as an act of courtesy to the great inventor'.

Incidentally Mr. Chew told us how to pronounce Cros, shed some darkness on the original use of 'Mary had a little lamb' in sound recording, and had something to say about the mysterious 'military phonograph' that appeared at the Paris Exposition of 1889.

Our thanks to Mr. Chew for an instructive and enjoyable evening, and we hope we may look forward to seeing him again in the not-too-distant future.

6/4/79

West Hobart, Tasmania 7000, Australia.

Dear Sir,

I was interested to read the article about covers and sleeves in your February '79 issue, in which it was mentioned that DURIUM covers are scarce (apart from their French language records). My collection includes three DURIUM records in their original covers. On the front we have (amongst other things) ''Durium — the self changing record'' (because both songs were on the same side). On the back we have several sketches which show one of their records being played on a gramophone, bent in half, and attacked with a hammer. Surely the music can't have been that bad!

Thank you for an interesting magazine.

Yours sincerely,

DONALD L. TAYLOR

#### 9 MAR 79

Dear Christopher,

Ref the February H&DN, and Barry Raynaud's article on record sleeves. He mentions the fact that 10" records after the mid-thirties were generally undersized.

I believe the fact is that the industry as a whole "went metric" at that time, probably to facilitate the interchange of masters, stampers etc between different countries. Consequently for many years the true sizes were 30cm and 25cm. It may come as a surprise to learn that there is no such thing as a twelve-inch LP or a seven-inch single, the latter being 17½ cm, and I was amused to read in a respected Hi Fi magazine a while ago a groan that record sizes might go metric — as though it was something to be feared in the future!

Having said that, I for one continue to call them twelve-inch and so forth, and I never did like the way they "decimated" the currency.....

Yours sincerely,

(IAN COSENS)

P.S. I am replying to Frank Andrews' comments on my article later, but that will be a longer letter. P.P.S. Have you any information at all on dating Berliner machines by the J serial number of the soundbox? Mine is J 6343.

[Editor's reply:] I did try to analyse the serial numbers on Johnson soundboxes some years ago, but no discernible pattern emerged. Some had a steel front-plate, thinner than the brass ones, and these tended to have lower numbers; however, they also tended to be on later (1899-1900) machines. As far as machines sold in this country are concerned, one has fairly close dating information in the company names and trade-marks. For example, I have seen two recently which could be dated reasonably confidently to the period April - July 1899, since they had the Angel trade-mark but no 'Ltd.' in the company name.

# People, Paper and Things

BY GEORGE FROW

I much regret to have to record the death of Eddie Ferguson in Eastern Scotland early in April. Whilst attending a business course in London in February he came along to our meeting, and in a short talk brought a breath of Scotland into the proceedings with his account of the setting-up of the East Fife branch of the Society. Eddie was really a first-class member in every sense, and had recently been of generous help in a Society matter. On the Society's behalf I have expressed sympathy to Mrs. Ferguson and their family. Eddie enjoyed his hobby to the full and infected those around him with his keenness and energy. The East Fife branch, of which Eddie was quite a force, will continue to meet, and enquiries should be made to Jim Goodall,

This year sees the sesqui-centennial of the invention of that truly British musical instrument the concertina or melodeon. Its inventor and patentee was a man renowned in other directions entirely, Sir Charles Wheatstone, who went on to develop the telegraph, some results of which are still in use in branch-line railway signalling, and he also invented the rheostat, stereoscope and synchronised electric clocks. In 1829 Wheatstone

(1802-75) was a musical instrument maker; his English concertina had a double action, playing the same note on compression and expansion, as opposed to the German variety which had single action and changed the note. His concertina came in several varieties, treble, tenor, bass and double-bass, the compass of the set being seven octaves, and in its time its most prolific composer was Edward Silas. It had great popularity from the 1880s to the Great War and bands of them were formed among working men's clubs, as well as being a popular instrument among all types of people. It is found fairly frequently on early recordings by such musichall stars as Alexander Prince and Percy Honri ("A Concert-in-a Turn"), many of which have survived. Prince, who died in the late 'twenties, left a fairly rich legacy on the Regal labels, many of them being electrically recorded, and his five Blue Amberols seem to turn up fairly easily, and give the concertina a chance to show itself in several moods, pert in "Merry Widow" Selection (23111), wistful in the Irish Medley (23029) and Bonnie Scotland (23176) and sonorous in Nazareth (23055) and Forgotten Melodies (23128). Both Prince and Honri could make the concertina 'chime' or sound like other musical instruments, in fact it was one of many models, and perhaps this knowledge that it was 'one of ours' will make British members listen again to those Prince discs and cylinders. The concertina is having a new lease of life among younger players.

A small, but I think, worthwhile point has come out of Kenneth Chew's fascinating talk to the London meeting in April on the history of the Science Museum and the story of the original Edison Phonograph enshrined therein until 1929. Afterwards Kenneth Chew mentioned to me that he had always wondered if the early Director of the Patent Museum (later Science Museum) in the last century, a Major-General Donnelly, had been the pattern for Major-General Stanley in Gilbert and Sullivan's "Pirates of Penzance". Donnelly, a Royal Engineer, occupied the Director's chair for many years, achieving promotion from the rank of Lieutenant to Major-General without having to leave it to mine, or sap, or whatever Royal Engineers do, in fact finally receiving a knighthood. I put this question to the Society's Gilbert and Sullivan expert (and publisher of the bi-monthly "Gilbertian Gossip") Michael Walters, of the Tring Museum, Tring, Herts. (and bird expert by occupation), suggesting that Donnelly's apparent ability with "differential calculus, the square on the hypotenuse" and "matters animal and mineral" could have inspired Gilbert to caricature him as Major-General Stanley. As members will know, many of Gilbert's characters were based on real people of the day, for instance Sir Joseph Porter in "H.M.S. Pinafore" who 'polished up the handle on the big front door' was inspired by W. H. Smith, First Lord of the Admiralty in 1877, Michael Walters wonders if Donnelly's name was sufficiently known to the general public to become the object of Gilbert's satire, but has promised to pursue this and ventilate this theory in his magazine.

Arthur Marshall is often heard on the wireless these days as an occasional member of the "Any Questions" team, or as a reader of book extracts. A history master at Oundle School, he was heard sometimes in BBC variety before the last war, something considered quite unusual for a public schoolmaster. His monologues usually took the form of a bossy schoolmistress, the sort we all know but who never quite existed, and a number of these were issued in a series for Columbia from 1936-7 onward, which were listed for up to five years. In spite of that, they are rarely found now, and one can only hope that Marshall will re-record these for us one day, or that they will be re-issued. The original Columbias were DB 1646 - 1652 - 1657 - 1729 and 1817, and since picking up two in 1938 cheaply, I have never seen any since. Perhaps other members with a liking of this style of humour will have been luckier; this is good comedy of the kind that only Arthur Marshall or Joyce Grenfell can put over.

I am always glad to be able to report a bargain, and with record prices taking off into the unattainable, am happy to report top quality for under £1. A couple of years ago, a recording on the Windmill label, and selling only from racks in supermarkets at 50 pence, was acclaimed by all the experts as being the very best version of Beethoven's Emperor Concerto bar none, and this has turned up again in Woolworth's on Chevron CHVL 018 at 89 pence. It is played by the Nuremburg Symphony Orchestra (Rato Tschupp), with piano soloist Hanae Nakajima, and there are several high-quality Beethoven concertos and solo pieces by the same people in the same series. Go to it!

From Morocco comes a photograph of a 5ft x 6ft carpet made by Jean-Paul Agnard and his wife, and showing an Edison Triumph Phonograph with petalled floral horn, surmounted by a banner transfer suitably adapted to the 1977 Centenary. Jean-Paul Agnard tells me the carpet has 48,000 ties, which would make double that quantity of wool tufts, if they are inserted the way I remember from years ago. He is planning something of interest to canine admirers, he tells me, next time.

From France I have a circular put out by Alain Floch, 75012, Paris, in which he is offering reproduction Pathé phonograph reproducers complete, or parts for same. These are made in black plastic with Pathé coq and lettering and cost complete, 95 Francs. An easily understood leaflet is available to anyone interested, by writing to Paris.

One who has been on the phonograph scene for a long while is Tim Brooks, and happily last year we were able to meet for a brief chat. He is an accumulator of phonograph and gramophone paper-work, catalogues, manuals, leaflets, and the like, and every now and then offers some of these through a postal auction. This is mentioned just in case there are one or two members who don't know about it — and this comes from one who is frequently the "last to hear" — and because there are sometimes catalogues which might appeal to the operatic, jazz, swing and other followers in the Society. Those interested should write to him at

Jackson Heights, New York 11370, USA. Auctions, whether in person or by post, have never appealed very much to your correspondent, but if one or two members are in a position to exchange catalogues, manuals, leaflets, they can write to me; I have a number of duplicates, particularly of British record catalogues of later rather than earlier years, and would like to see the idea of using spare material, be it machines or manuals, to improve members' collections.

One has never considered HILLANDALE NEWS circulating in anything but an English version, firstly because its overseas readers have so many different languages as their mother tongues, and secondly its editorial staff have never boasted any linguistic learnings, and possibly still think of Britain as an island off Europe. This insularity was jolted with the arrival of a small magazine from Holland called "The Soundbox", having versions available in Dutch, German and French. It is put out by Nipper (an intelligent doggie indeed) of Amsterdam, and is obviously out to build itself up as a magazine with advertisements, though the first issue seems to have that ideal somewhat reversed. For the present "The Soundbox" would seem to commend itself to countries bordering Holland despite having Stephen Morris on the board of Collaborators — a difficult description which I hope will be changed. This little magazine will grow and it will find enough to flourish on I hope, an important matter when there are so many talking machine magazines about today.

When the telephone rings and the caller says that he or she is involved in a production of "Pygmalion" or "My Fair Lady", this is invariably followed by a request to borrow a phonograph as an essential furnishing of Professor Higgins' study. I have always had a rough old 2-minute Standard, which doesn't play, put aside for this purpose and recently loaned it and a 30 inch brass horn to a local county college for "My Fair Lady". In return, my wife and I were invited to the gala night performance attended by the governors and many people prominent in county affairs, for which we put on our best togs, and everyone enjoyed a very pleasant evening. The old Standard never reached the stage; with the eighteen or so scene changes in the production it was thought too dangerous to use the real thing, and something else rather less effective was made up — a consideration I appreciated — while the Standard sat on a plinth of its own in the auditorium with a spotlight specially for it. As we enjoyed a first-class dinner afterwards, we reflected that having devoted a lot to the Phonograph in the past 25 years or so, the Phonograph in the shape of this old Standard was doing its bit in return, even though I suppose as ratepayers we were contributing towards the evening. Ah well, you just can't win 'em all, and it was a memorable evening!

# The Body and Soul of the Gramophone

PART 8

Assembling and Tuning Soundboxes

Soundboxes are like musical instruments in that they need to be finely adjusted to give the best reproduction. Furthermore, the life of a record is affected by the accuracy of adjustment. Poor tuning can result either in a deficiency of the bass register or in poor definition, or both. Improper support of the diaphragm between its gaskets, or bad stylus adjustment, can cause rattle in the soundbox itself and/or chattering on the record, with attendant wear in the groove.

A gramophone soundbox is one of the simplest of mechanical devices, with a handful of components. Yet the factors governing the reproduction are as numerous as those of an electrical pick-up circuit. The resilience of the gaskets, for example, must be matched to that of the diaphragm, and the combined resilience of these two components must also have the correct relationship with the length of the stylus, and with the inertia of the stylus plus that of the diaphragm.

The conclusions about the mechanical relationship between the parts of a soundbox became apparent to me only after constantly experimenting in an effort to eliminate chatter and wear on records and, of course, the ever-present urge to go one better! Naturally in this process I have ruined a lot of records, destroyed diaphragms and even succeeded in prising a lug off an H.M.V. No. 4! Of course, that box never uttered another sound! (I don't know why — those lugs are just sweated on; and all you need to replace them is a soldering iron, a close-fitting rod to get the alignment right and some solder — Ed.) Soundboxes have been built on so many different designs that it would be interesting to know on what scientific basis each design was compiled. After years of observation, I feel that all the complicated mathematical calculations have still not gone far enough to get the best out of acoustic soundboxes.

Apart from chatter, if there is any distortion on certain frequencies; if the reproduction as a whole sounds 'not quite right'; or if you find scratches appearing on records, it is time to examine the soundbox, maybe take it to pieces, replace a damaged diaphragm or gaskets, re-

assemble, finely adjust and re-tune.

What I am saying here is purely the result of personal experiment and observation. None of it has been gathered from text books or reading matter of any kind, and consequently I feel that some of the findings may raise a few points of interest by throwing fresh light on the subject.

When, after years of disuse, an old gramophone is dug out of limbo, it is all too common these days to find the soundbox to have received treatment more applicable to a football—diaphragm cracked or bashed in, gaskets perished and the stylus mount either loose or rusted up. In this useless condition, gramophones which otherwise are fast becoming valuable antiques are being needlessly thrown away, converted into needlework boxes and book cabinets or otherwise destroyed. So, before parting with a gramophone, it would be profitable, if one wants to use it or retain its value, to see whether it can be put in order.

If I describe the tuning of a soundbox from scratch, it will include all the adjustments and replacements that may be called for in any particular case. First, we will assume we have all the parts of the soundbox under repair, and a selection of mica or metal diaphragms that will fit. Ideally, we could do with a choice of gaskets of varying thicknesses and constituencies as some soundbox housings are deeper than others and some gaskets produce better results than others from a given diaphragm, and vice versa. In practice, there seems to be a choice between only two standard types of gasket: the hollow tube of white or black rubber which varies slightly around 1/4" in thickness, and the solid moulded rubber of the same thickness. The rubber most commonly used seems to harden with age. The tone of a soundbox is greatly altered according to both the degree of compression on the gasket and to its degree of resilience. I would have thought manufacturers could have experimented with rubber of different constituencies before determining which one produced the best results from any particular type of diaphragm or soundbox. This is one reason why I feel the acoustic soundbox has never been exploited to its full capacity. I have tried cycle-valve tubing, but it is far too soft and produces very poor results — a muffled "boxy" sound. Modern electric flex sleeving is also useless as most of it is made of plastic which has no resilience at all, However, the standard gasket does produce good results from most soundboxes. All depends upon the correct amount of compression applied to it. For mica, I have found solid rubber gives the clearer tone and no distortion while white rubber tube sometimes gives a slight hollowness. With metal diaphragms, the choice of gasket is less critical when most of the compliance is offered by a comparatively thin flange, but for metal diaphragms offering stiffer resistance, gasket resilience is still important.

I have dwelt at length on gaskets as I believe their choice to be more important than appears to have been realised. Apart from resilience, the gasket should have a minimal amount of compliance, just enough to allow the diaphragm to comply freely. If it is too soft, it merely absorbs vibrations from the diaphragm so that the full body of sound is not passed into the tone arm. If the gasket is too hard or tight, the soundbox will tend to miss out the bass notes, producing a somewhat shallow tone and might even cause some damage to the sound track where bass passages occur. The next thing of major importance is to choose a diaphragm with the right degree of compliance for the size of the soundbox. Too much compliance and it will tend to absorb some of the sound rather than pass it on, and could also cause an imbalance sufficient to damage the record. If the diaphragm is too stiff, it will not be able to respond properly to bass notes and will tend to cause the needle to jump the low frequencies and damage the record. The diaphragm should also have a high degree of resilience to enable it to respond well to high frequencies, thus giving good definition. It is because of its high resilience that mica produces such good results, and the same applies to the moulded centres of metal diaphragms.

When choosing a mica diaphragm from a number of spares of the same size, I have found that they vary in thickness so that their compliance will also vary. One can roughly compare their thicknesses by the pitch of the ring they give when lightly flicked in the air by one's finger. As there is an optimum degree of compliance for the best results, so one has to choose a diaphragm having an optimum thickness, for it is at this particular thickness that the diaphragm under working conditions gives the greatest movement response at all frequencies over a maximum area. I find that the best way is to try out, say, three different thicknesses in

succession and rely on my ears to judge the best tone.

Having selected the mica diaphragm, undo the screws at the back of the soundbox and lift off the backplate. Next, using a fine screwdriver, undo the tiny screw securing the old diaphragm to the stylus, carefully lift out the uppermost gasket ring and then take out the damaged diaphragm together with the remaining gasket ring. In some soundboxes, a threaded portion of the stylus protrudes through the centre of the diaphragm which is secured between two microscopic nuts with a minute washer bearing on each side of the diaphragm. In this case, thin long-nosed pliers are needed to unscrew the uppermost nut. Great care should be taken not to drop the nut or screw, for it is very small and has a habit of disappearing into thin air! Now replace the back-plate and check that, when the stylus is held in its normal position, the end of it appears exactly in the centre of the hole in the backplate. If it is slightly to one side, slacken the screws holding the tension-springs sufficiently to slide the stylus mount along its knife-edge fulcra till the end of the stylus is in a central position. Finally, tighten the screws again till the stylus mount sits firmly on its fulcra, but don't tighten more than is necessary. If the end of the stylus is slightly above or below the centre of the backplate aperture, the end of the stylus can be bent very slightly with the aid of the pliers. (Some cheap soundboxes are not assembled all that precisely.) Having done this, remove the backplate and cut two lengths of new gasket to fit snugly round the inside perimeter of the housing. There must be no gap between the ends, but if the gasket is too long it will buckle. Next, remove the top gasket, lay the diaphragm on top of the bottom one so that the hole in the centre exactly coincides with the screw hole in the end of the stylus; or if the stylus has a threaded end, that end should pass cleanly through the hole in the diaphragm. Now replace the upper gasket and the backplate which should bear on the gasket with just enough compression to ensure there is no air space anywhere around the edges of the diaphragm. The thickness of the gasket chosen should exactly meet this requirement to obtain the best tonal range. The next important thing is to adjust alternately the screws holding the tension springs until the tip of the stylus only just touches the diaphragm. This will ensure that after securing the diaphragm, no pressure will be exerted on either side of it to put the soundbox out of balance. Next, remove the backplate once more and replace the screw and

its washer and turn till it is just tight enough to grip the diaphragm lightly. If tightened further, it may cause the mica to crack or flake at the centre and tend to put the diaphragm slightly out of alignment. This discrepancy is common and happens if the end of the stylus is the slightest bit bent, or if the head of the screw, the threaded lug on the end of the stylus, or the inner surfaces of securing nuts are not dead smooth and dead straight. So, to avoid any possible distortion of the diaphragm, it is better to allow a minimal amount of play at the centre before finally sealing the joint with beeswax or good quality hard candle wax. As the wax completely fills all interstices and also adheres, it makes the joint completely tight. I find the best way to seal the joint is to heat the end of a fine screwdriver in a candle flame, pick up some of the molten wax from the candle and carefully lay it round the end of the stylus where it joins the diaphragm. Having done that, lay the soundbox face up on the table and apply a lighted match to the bend in the stylus just above the diaphragm so that the heat will travel along the metal. The moment the wax begins to melt again, withdraw the match and the wax will settle into a neat round seal. If the match is applied too long, the molten wax will quickly spread across the diaphragm.

The last act is to test the soundbox. When the business end of the stylus is lightly tapped with a finger nail, it should produce a clear sharp sound. Tap it with the knuckle, any looseness will show up in the form of a slight 'click'; when tried on a record, the tone will be hollow and 'stringy'. This will mean that the gasket is probably not quite thick enough, but this can easily be remedied by removing the backplate and inserting a thin ring of paper above the gasket. If still not quite right, put in another ring and so on till the tone is quite clear.

Some soundboxes are made in one piece without a backplate, in which case the lower gasket and diaphragm are let in through the front before the top gasket is tucked in under the rim of the housing. Here it may be necessary to remove the stylus from its fulcra by completely undoing the tensioning screws before loosely attaching the diaphragm with the screw or nut. Having first put in the lower gasket, insert the diaphragm through the front of the soundbox loosely attached to the end of the stylus. Next, re-seat the stylus-mount on its fulcra, seeing that the head appears exactly in the centre of sleeve opening at the back of the soundbox. Next, tuck in the top gasket and adjust the two tensioning screws till the stylus is so aligned that when you lightly tap the needle end both from the front and from behind, a faint click is heard due to the play still remaining in the securing screw or nut. This will indicate that the stylus head is neither pulling nor pressing against the diaphragm, and is therefore in the correct position. Now lightly tighten the screw or nut and seal the joint as previously described.

Many soundboxes have their stylus mounted between conical pivots. There are no tensioning springs to adjust, and before attaching the diaphragm it is essential to see that the pivots are properly adjusted. Usually they consist of cone-ended shanks screwed through threaded holes in two lugs on the base of the housing and secured by locking nuts. If the stylus head is slightly to one side of the centre of the sleeve opening, this can be corrected by unscrewing the shank on one side and screwing in the shank on the other side until the stylus head appears dead central. Having done this, secure one shank firmly with the locking nut and gently screw in the other until it is just tight enough to allow the stylus to swing freely without allowing any side play. There must be no looseness whatever or chatter will result. It is best that there should be a very minimal amount of friction so that the stylus moves easily at the slightest touch. This will ensure that in a warm room or during hot weather it will not get loose due to expansion. Finally tighten the locking nut and test to see that the pivot has not tightened or loosened. This often happens and one has to juggle about a bit until the adjustment is exactly right after tightening the locking nut. Before tightening this nut, you may have to adjust the shank slightly on the loose side or vice-versa so that this critical adjustment is just right after finally tightening the nut. The slightest bit of side-play on the pivot produces rattle, while if it is tight, it will tear your records to ribbons!

Because of the smallness of screws and nuts used to fasten diaphragms to styli, it is difficult to start them on the thread without suitable tools, but I have found that by holding the soundbox level with the stylus underneath and laying the screw on the diaphragm, it is comparatively easy to coax the screw into the hole. Then, while holding the end of the stylus just beneath the screw so that its threaded hole coincides with the end of the screw, a fine screwdriver in the other hand can finish the job. (Often, the old wax in the screw-slot enables it to be stuck to the screwdriver — Ed.)

With metal diaphragms, the procedure is much the same as has already been described, except that one must take a great deal more care to see that the diaphragm does not get bent or buckled. Any bend or buckle will put the soundbox right out of balance and it is all too easily done. When tightening the nut or screw, the stylus should be rested on a firm surface or held in such a way that the diaphragm is not pressed against any part of the soundbox. If the diaphragm does get buckled, it should be removed and straightened out by pressing between two stout cardboard rings cut to match the width of the flange. I acquired plenty of such rings when I used to buy Columbia diaphragms packed between them.

When fixing a metal diaphragm it may be preferable to use a spot of suitable glue applied on both sides of the hole before tightening the fastening nut or screw, for wax can easily spread across the metal and is hard to remove. In fact, there is no seal at all in many metal soundboxes, the diaphragm being screwed on tightly between two small washers, thus making a perfectly secure joint. However, if the diaphragm is fastened between nuts on a threaded stylus, care must be taken when tightening with pliers, for the thread is so fine that it can easily be stripped. Lastly, when the diaphragm has been firmly secured, the chances are that the plane of the diaphragm will be slightly out of line so that the flange does not sit evenly flush on the gasket throughout its perimeter, which is essential if the diaphragm is not going to be buckled and the balance of the soundbox destroyed. This can be remedied by very carefully manipulating the rigid centre portion of the diaphragm with the fingers, bending the metal very slightly in the right direction to bring the diaphragm into correct alignment so that the whole perimeter of the flange rests exactly flush upon the lower gasket. Any misalignment can also be corrected by very slightly twisting the end of the stylus till the edges of the flange sit truly on the gasket seating. Having got that right, the upper gasket can be put in place and the backplate screwed on, or the outer gasket tucked in under the front rim. It only remains to screw on the front cover, put the soundbox on the gramophone and see if it plays! Where the gasket is tucked in, it should slide in easily under the rim of the housing without being loose. If pressure has to be applied, it is too thick and may buckle the diaphragm, and in any case, the tone will be impaired.

In the case of H.M.V. No. 4 boxes, provided the back can be lifted off after undoing the four screws, it is easy enough to replace the mica diaphragm. Provided the stylus moves freely on its pivot, the adjustment is best left alone as it is more complicated and will have been finely set before the instrument left the works. If the stylus seems a little stiff in its movement, the mushroom-headed locking screw on the outside of one of the lugs should be removed and the nut on the inside of the lug eased very slightly. This can be done by inserting a fine screwdriver in the hole where the locking nut was, and it will engage a groove in the top of the shank inside the lug. Give it a very small anti-clockwise turn and then see if the stylus moves freely. If it does, replace the locking screw and make sure the stylus still moves freely, for sometimes, as the screw is turned, it somehow alters the setting. The operation may have to be repeated several times, turning the shank first a little one way and then a little further if necessary until, after replacing the lock screw, the stylus is free. At each attempt, see that the nut on the inside of the lug is just finger tight, for when this nut is unscrewed, the threadless shank can be pulled right out; or if partially unscrewed, the pivot will be partially drawn out of the boss on the stylus when the lock screw is tightened and this can make the mount too loose. So, before

tightening the lock screw, test with the finger to see that the nut is not loose. It will automatically tighten as the lock-screw is tightened and at the same time leave the stylus free.

An H.M.V. No. 4 box is tuned firstly by choosing a mica of the right thickness, and secondly, by achieving the correct setting of its pivot mounts. For reasons I do not know, the quality of reproduction is affected when the position of one or other of the pivot shanks is altered by turning it in the lug. Unless absolutely necessary the mounts of an H.M.V. box should be left severely alone.

H.M.V. 5A and 5B soundboxes are more difficult to deal with, as before the diaphragm can be changed, the stylus has to be unsoldered from the spider in the centre, and resoldered afterwards. In any case, the diaphragms and felt gaskets are all standard and no other diaphragm or gasket will fit, so there is little if anything one can do in the way of tuning. Apart from that, even though the screws are taken out, more often than not, the backplate cannot be prized off without breaking it. Columbia all-metal soundboxes are much more straightforward and easy to adjust, having just the cone-end screw-in shanks with one locking nut on the outside of each lug. Their diaphragms are of standard pattern consisting of a moulded aluminium centre mounted on a very thin and delicately designed flange. No other diaphragm will fit a Columbia box.

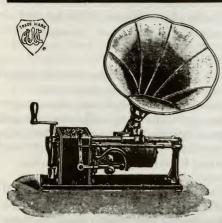
One other point — I can never think of everything when I want to! It sometimes happens that while a record is playing, one particular note of a certain frequency, mostly noticeable from a piano or a certain instrument in an orchestra, is accentuated out of all proportion. This is often the result of the soundbox mechanism as a whole, having a resonant frequency of its own. In other words, if the stylus is plucked or receives an impact, it will vibrate for a limited period after the impact in the manner of a plucked string, and when a note of that same frequency occurs on the record, the degree of resonance in the mechanism combined with the note on the record is sufficient to cause that note to be exaggerated. This causes the needle point to swing at an amplitude greater than that of the modulations on the sound track, consequently damaging the record. This happened some while ago when playing a piano record on an H.M.V. portable with a No. 5A soundbox, but it did not occur when playing the same record on a machine fitted with a No. 4 box. Though the 5A played the rest of the disc OK, it left a scratch on the distorted note. It seems even the best soundboxes are not immune to some mysterious quirk in some way connected with the balance or resonance of the mechanism. and it leads me to believe that apart from the right amount of resilience on the part of the diaphragm and gaskets, they must also offer a certain amount of damping just sufficient to prevent them resonating at certain frequencies. Thus both the constituency of the materials used in these components and the way they are adjusted when assembled are important in the effect they have on the tuning of a soundbox. So, if a soundbox jars on certain notes, it may need readjusting and/or a different diaphragm and gasket may cure it.

Countless soundboxes I have seen damaged by careless handling. Usually the damage results from dropping the soundbox on the record (taking a chunk out of that as well!); picking up a soundbox by the stylus and damaging the diaphragm through the undue pressure brought against it; screwing a needle in so tight that the diaphragm gets cracked or pulled out of shape when trying to release it; inadvertent knocks or blows to the stylus or diaphragm; or leaving the soundbox in the rest position with the needle still in it sticking upwards so that when the lid is closed, it falls on the needle and away goes the diaphragm! Another thing not to do is to store soundboxes loose in drawers amongst a whole lot of other bits and pieces that can easily foul the stylus or fall onto the diaphragm. If your soundbox is in good order or has just been repaired, treat it like china, for not only are spares expensive and hard to come by, but it is a fiddling job to get it right. One more thought:— Always see that the lid of a portable is securely propped up while the machine is in use. The lid of one of my portables once slipped and completely destroyed the mica diaphragm of the soundbox. Fortunately I had a spare!

Just to show what is so often the result of experiment, trial and error or pure fluke rather

than of meticulously calculated theory, I recently repaired an ordinary pivot-mounted soundbox on which the pivots were loose, the gaskets perished and the diaphragm off-centre. I had a stock of metal diaphragms of the right size which I had obtained years ago from a music dealer about to close down, and a pair of hollow gaskets of exactly the right thickness and which happened to be of ideal constituency — they were all I had left that were any good, and the diaphragm was of a different mould from the original, but it happened to fit. After putting the pieces together and adjusting the pivot mount. I put the box on the tone arm of my H.M.V. portable which it luckily fitted, and tested it. The tone was terrific, having a greater volume and tonal range than that of any other soundbox I have ever previously heard or experimented with. All the deepest bass notes came out in full flood. The diaphragm was only 48mm or 1% inches in diameter and yet the sound was much more powerful than that obtained from soundboxes with bigger diaphragms. I have never found out the reason for this, I put similar diaphragms in three of my old metal soundboxes which I rarely use. They are only cheap models, but I got the same astounding results - a beautiful rich full bodied tone that would comfortably fill a fairly large hall and which was certainly too strong for a small room, I mention this instance in support of my case in the defence of the Clockwork-Acoustic, If a soundbox can be made to respond so powerfully to a standard '78' record, it would seem that to give comfortable listening in a room, it would not be necessary to record modulations on the sound track at such amplitude. So, with sound recorded with less amplitude on the track, it would be possible to make the grooves finer and closer together, using a needle point of smaller diameter and of harder material. Thus, we could at least have had extended play records (10 -15 minutes per side) successfully played on acoustic gramophones! (I think there is a basic fallacy in that argument! — Ed.)

E. J. Goodall



### Excelsior-Hartguss-Walzen!

D. R. P. 112 517.

Einzig lizenzierter Hartguss-Record! 'Anerkannt grösst Haltbarkeit bei hervorragender Klangfülle.

Reichhaltiges Programm, monatliche Nachträge. Excelsior - Phonographen und Platten - Apparate.

### Excelsiorwerk m. b. H., Köln

Fabrikniederlage für Berlin und Umgegend: W. Bahre, Berlin Friedrich-Strasse 12.

Engros-Lager und General-Vertreter für Hamburg und Schleswig Holstein: Max Kunath, Hamburg, Deich-Strasse 36. General-Vertretung für Bayern: G. Kratzer, Nürnberg, Grübelstr. 28

Exportmusterlager: Berlin SO., Melchiorstr. 12, Carl Drisser — London, E. C. Hatton Oardon 17, All F. Vischer. — Parls, Rue Lafayette 99, L d'Aragon.

Excelsior machines like these were sold in the U.K. through J. G. Murdoch; the EWC monogram in the top left-hand corner is usually found stamped into the aluminium reproducer, and also as a transfer on front of the motor casing.

# **Gone Missing!**

#### BY FRANK ANDREWS

There are people "going missing" every day, and persons have been doing so for years past. Some of these people actually did leave their homes and home towns and were never heard of again.

I am interested in people who have "gone missing", a special kind of people who have "gone missing", sometimes alone, sometimes with a companion or two, and sometimes in groups numbering up to thirty persons or so!

My special people have "gone missing" on talking machine records! In other words, they once had a documental existence but such documentation is no longer known to exist, and therefore the "gone missing" persons are without any names.

The possibility of discovering who these missing persons were, however, is not completely lost because it is known, in many instances, where their names can be found if only one looks in the right places, and those places are the labels on talking machine records when all other avenues are closed to investigation.

For instance, there are a lot of people "gone missing" on the Millophone supplements and it is unfortunate that one cannot say how many people are so missing.

To be more precise, persons have "gone missing" on three kinds of Millophone records, and in chronological order of issuance, these records were the 10-ins. diameter "Millophone Record", the 104-ins. diameter "Millophone New Record", and the 104-ins. diameter "Millophone New Celebrity Record".

It is possible that there were 12-ins. diameter "Millophone New Celebrity Records"; also that the last issued "Millophone New Records" were reduced in size to 10-ins. diameter.

#### **GONE MISSING FOREVER?**

It must be said, without any doubt at all, that the 10-ins. diameter early Millophone Records must be some of the most rarely found of all discs. I know of nobody who possesses an example of this label which I cannot, therefore, describe either as to design or its colours, in spite of the fact that there were, allegedly, approximately 300 titles issued under this label and there is a known catalogue number range covering issues a little short of this, the numbers being 1,000 to 1,139.

All the people on this label have "gone missing", except for the Band of H.M. Grenadier Guards, the Band of H.M. Scots Guards, The British Imperial Band, and Mons. Vernay, clarionettist. The catalogue numbers covering these four "artists" are 1,001 and 1008.

Do you know of any others? Has anyone a record with a "Millophone Record" label, which they can describe? Have all these artists who appeared under this label "gone missing" for ever, both aurally and in print?

Of course, all Millophone Records, no matter of what kind, were subcontracted records, the later two types coming from J. E. Hough Ltd.'s Edison Bell works, although the earliest of them were from the Edison Bell Consolidated Phonograph Company Ltd.; but the origin of the first type, the 10-ins. diameter Millophone Records, remains unknown, having but four sides from which one might deduce the originating matrices. Yet, if I could trace "The Water

Melon", by the Scots Guards Band as a Nicole Record, I would plump for the Millophone Records as having been pressed from Nicole Masters, with Mons. Vernay being the solo clarionettist on a French Nicole Recording by the Band of La Garde Republicaine.

The Mill-o-phone New Records, with the green and gold labels, are easily recognisable as originating from Edison Bell Disc Records and Edison Bell Velvet Face Records, the later issues sometimes coming from the Winner matrices of the Winner Record Company Limited, a company controlled by J. E. Hough Limited.

Unlike the Millophone Records, I am not sure what the lowest catalogue number was on the Millophone New Records. The lowest I have knowledge of is No. 140, and it would not surprise me at all if this was, indeed, the lowest number used! Can anybody produce a lower numbered disc? Perhaps the No. 140, with Edison Bell matrices, followed on No. 1,139 which used Nicole Record? matrices!

Like the Millophone Records, there is no knowing what the highest catalogue number was with the Millophone New Records, the highest known to me is No. 386, giving a total issue of 247 discs, if all the numbers between the known extremes were put into use.

"The Missing Persons Bureau" on Millophone New Records consists of the artistes on discs of 104-ins. diameter, below number 140, and those on records numbered 195 to 223, 225 to 228, 264 to 271, 274 to 287, 289, 291, 292, 294 to 303, 305 to 314, 316 to 329, 331 to 358, 360 to 385, and any beyond number 386. If you have any of these records will you please send me the details, and state the size of the disc, whether 10-ins. or 104-ins. diameter?

The "Millophone New Celebrity Records" were derived from the Velvet Face Records (a few of which were single-side recorded), and those artistes "gone missing" on this label, which was red and gold, are greater in number than those known, therefore it will be much simpler for me to give you the numbers of those records of which we have the details, so the KNOWN discs are those with the following catalogue numbers:— 25, 30, 33, 36, 40, 47, 49, 54, 55, 86, 90. If you have any Millophone New Celebrity Records, other than these, will you please send me details?

It is considered that the series commenced at No. 1 and that it possibly progressed beyond the 100 mark, which it could well have done should it be the case that the Millophone New Records did commence at No. 140.

I have no knowledge at all of 12-ins. diameter Millophone New Celebrity Records, although I seem to recall that this type of record did have an existence, being derived from the 12-ins. diameter Velvet Face Records.

Any information you may have about these differing types of Millophone records will be gratefully received by me, Frank Andrews, Neasden, N.W.10.

#### THE REX RECORD

I expect most members are aware of the fact that besides the disc records styled "Rex", which were made, firstly, by the "Crystalate" company and, secondly, by the Decca Record Company Ltd., there was also a two-minute wax cylinder record made by the Lambert Co. Ltd. which was styled "The 'REX' Gold Moulded Record". But there was another Rex record, and my thanks are due to Tony Barker, the proprietor and publisher of "Music Hall Records", for bringing this third example to my notice.

This record is a disc, with a red label having black script, and is styled "The Rex Record", around the top of the label. There are no catalogue or face numbers on the example seen, and

the only number visible is a hand-inscribed matrix, 3215, on one side. The label reads "Made in England". No artistes' names, but the titles were current in 1908 and 1909. Has anyone any further information about these "The Rex Records"?

# Nipper Returns to his Home

BY STEVEN I. RAMM

On April 10, 1979 at 7.13 p.m. Nipper, the RCA Victor, and previously the Victor Talking Machine Company, trademark returned home to Camden, New Jersey. It had been 10 years since he left.

For 54 years Nipper appeared in stained glass windows atop the tower of Building 17 at the RCA plant in Camden. When RCA decided to change its trademark to a more modern one the windows were removed and donated to two universities and the Smithsonian Institution in Washington, D.C. The windows were covered with white boards displaying the new symbol in red.

With the centenary of the phonograph in 1977, RCA began to again use Nipper in its Advertising. (In Great Britain the HMV Company had not discontinued using the trademark.) It was decided to replace the windows and new ones were ordered from the same manufacturer as the originals. The new windows were dedicated ten years to the day that the former ones were removed. A crowd of about 500 people, mostly RCA employees and their families, gathered across the street from Building 17 to observe the windows being lighted. The Governor of New Jersey declared April 10, 1979 as Nipper Day. Nipper had finally come home.



### Letter to the Editor

Dear Sir,

At a recent meeting of the Society, Mr. Frank Holland, of the National Musical Museum, who presented a very interesting programme, brought along some disc records which had been produced in connection with automatic pianoforte players, or which could be played in conjunction with same; one of them being of Melba, for which a pianoforte accompanying roll could be played.

I have recently come across a number of items connected with this aspect of recordings on discs and pianoforte rolls being designed to be played simultaneously, and I thought perhaps other members would

like to read something about the subject.

In the January edition of the Talking Machine World, published in America, in 1911, there was announced, "A New Idea With Music Roll Manufacturers".

One manufacturer had been making up a number of piano accompaniment rolls to the arranged scores as used by Victor. Rolls had already been made to accompany the singing on records of Caruso, Blass, and

Schumann-Heink. Others were being made to accompany violin and 'cello recordings.

The player pianoforte would, of necessity, have had to be tuned to the proper pitch, as recorded. Alternatively, but less successfully, the speed of the reproducing machine might be adjusted to bring about the correct pitch at which the roll would be played. In either case, the matter of synchronisation would have to be under close attention, the speed of the roll and the talking machine being made to match. The operator of the player-piano then had to watch the phrasing. A great benefit to be obtained from this practice of using piano rolls with records was said to be the insight gained into the art of the singer who had recorded and into the artistic content, or otherwise, of the songs themselves.

In February 1911 a list of Q.R.S. rolls and Victor Records was published and, with the Q.R.S. roll number first, these were 70099/96000, 70060/64134, 70036/88067, 70114/88108, 70094/64069, 70098/88127, 70100/64072, 70096/96200. Mellographic Roll Co., 0849/87017, 01217/96200 and 0850/88078.

Twenty-six more rolls were in preparation by the Q.R.S. company, and the Universal Music Company of Buffalo also stocked a few similar rolls in their catalogue, but they were not listed.

Does anybody know if any L.P. recordings have been made of discs and rolls being played in unison?

Yours sincerely,

Frank Andrews

(I seem to recall that in the 1920s the Aeolian Co. patented a player-piano which had a gramophone built in for synchronous playing. I do not know if it was ever put into production. — Ed.)

# The Amberol Controversy

**PART 2 (JUNE 1910)** 

Sir,

It appears that the discussion is not to be confined to Mr. Henry Seymour and myself. I cannot help thinking that this is regrettable, tending as it does to confuse the issues. Since Messrs. Wilcox and J. H. have seen fit to enter into the discussion, I beg leave to address them. The question of wear of the Amberol record is of vital importance, so I deal with that first. On this matter I come into conflict with J. H. I gather from this gentleman's remarks that he does not actually use the long record — however, I may be wrong. J. H. declares that owing to the finer track the wear must necessarily be greater. From a practical point of view I cannot agree, but perhaps J. H. would like some theoretical reasoning as an aid to belief. Even Mr. Seymour admits the Amberol material to be more fitted for wear than that hitherto employed, so we start better equipped. It will then be a question of the bearing area supplied by the sapphire as to whether increased wear is going to be experienced or not. The properties of ball or button and wedge sapphires are quite different.

Looked at geometrically, there is no bearing area at all, but practically the sapphire sinks in to a certain extent, increasing the area of contact and diminishing the maximum stress. Consider a section of the H stylus taken through the centre and at right angles to the track, it may best be described as approximately wedge-shaped. The longitudinal section through the centre is circular. All sections taken perpendicular to the two former are approximately ellipses with flat sides in the direction of the track. If this sapphire, ground accurately to fit the track, be imagined pressed into the track, it will be seen that for a very small penetration considerable bearing area will be supplied by the sides of the track; relatively much more than is the case with a ball sapphire. In fact I express the opinion that the bearing area to be obtained with equal indentations with the H. and C. sapphires in their respective tracks is, if anything, in favour of the H. Having made this statement, I must look forward to further trouble from Mr. Seymour. Before replying I hope he will give the matter due consideration and not use so much bluster. After thinking over these remarks I think J. H. will take a more reasonable view of the matter. He should not pay any attention to Mr. Seymour's remark concerning the sides of the track being like razor edges; a simple calculation or microscopic observation will prove that his remark is fallacious. Mr. Wilcox confesses he does not see why all the swivelling arrangements are required. I refer him to my previous letter, and beg him carefully consider my further remarks here. The properties of elliptical and button sapphires are widely different. For, imagine a slight rotation to be given to both in their respective tracks. In the case of the button no increased stress is produced in the walls of the track, but with the wedge shaped H sapphire it is far different. Here the stylus tends to leave the bottom, reducing the bearing area to a very large extent, and hence enormously increasing the stress. This causes the powder complained of by users of floating reproducers, which are not swivelled in the right place. Passing on to the next important point, the question of volume. Here again J. H. sides with Mr. Seymour, Why, I don't know, Because certain experimenters have not been able to produce a loud toned 200-thread record, it does not follow that such a record is unproduceable. I call his attention to your reviewer's remarks on "Brindisi" last month, and since the question is one in which a difference of opinion is impossible to those who use Edison machines, I call upon our Editor to make a statement. The fact is the Amberol record is far less strident than the Standard, and this, combined with its superb quality of tone, will open the doors of thousands previously closed to the talking machine. Verily the star of the Edison is in the ascendant. Reaching the subject of diaphragms, apparently J. H. disagrees with Mr. Seymour - this is quite refreshing. I am in complete accord with J. H. as to the superiority of glass over mica for reproducing almost every kind of record. But here J. H. supplies us with figures for the thickness, and were I like Mr. Seymour I should make capital out of the obvious slip. J. H. recommends a diaphragm of 7.40 mm thickness, or in the neighbourhood of a quarter of an inch! I have no quarrel with those who prefer any sort of diaphragm to my favourite copper, but I express the opinion that the Edison people are the best judges of the suitability of a diaphragm to reproduce their phonograms, since they hear the original and endeavour to reproduce it as far as is in their power. . . . .

Adrian F. Sykes



Dear Sir . . . . .

The whole question of the superior reproducer for Amberol records seems to depend upon the "swivel", according to Mr. Sykes. Even with this ideal swivelling device, it is possible, unless the greatest care be taken, to spoil half-a-dozen records, as he himself has told us it was his misfortune to do. But the swivel is Mr. Sykes' all-in-all, and an Edison reproducer is not a floating one "because the diaphragm does not float and because the thrust from the record is not direct." Whether the fixed reproducer shell is "to all intents and purposes" a floater is immaterial, but it should be pointed out that as far as wear of records is concerned, there is no practical difference between a floating reproducer proper, resting its entire mass on the record, and a floating fantail weight in connection with a fixed diaphragm, which similarly exerts its pressure on the record. The necessity for the extra swivelling device in the Model H, to more readily adapt the stylus to the fine track of the Amberol record, is due more than anything else to the peculiar shape and disposition of said stylus (a small button type set sideways), which were undoubtedly designed to counteract the very rapid wear which the makers knew would be inevitable otherwise. On the other hand, given a tougher material like cellulose, the ball-shaped stylus would always be in track if made to the correct diameter or less, without the need of any special swivelling device at all, by reason of its more readily adaptable form.

On the subject of volume, Mr. Sykes is again voluminous. He says: "There is a certain reason, it is true, why the long records should reproduce with slightly less volume than the Standard, and that is they are played with what is really a small ball sapphire, while the Standards are or should be played with the regulation button." Mr. Sykes must have forgotten that he has already said that the Amberols are not less in volume than the Standard records. Anyhow, he now admits they are "slightly less". Perhaps he will discover the limit of loss as he gets on with the discussion. He is entirely wrong about the ball sapphire, as he will see if he will take the trouble to look.

"Speech possesses comparatively little energy," says Mr. Sykes, but a great deal depends on who talks. In the recording of speech, says Mr. Sykes, "to obtain theoretically perfect results, all frictional resistance must be abolished. The record [Mr. S. means blank] acts as a damping resistance, and Mr. Seymour admits that the stylus is able to penetrate the blank more easily with the 200-thread system. It will be obvious that the stylus will find less difficulty in leaving the blank than entering it. Thus serious distortion is introduced."

I entirely dispute Mr. Sykes' contention that to obtain theoretically perfect results in recording all frictional resistance must be done away with. This frictional resistance, it is true, acts as a damper to the diaphragm, but this may be set off in practice by the employment of a diaphragm or super-normal sensitivity, aided by a tensional check action in its upward movement. By such means, the activity of the recording

stylus in entering the blank and leaving it would be equalised.

That Mr. Sykes is all at sea about the part which frictional resistance plays in the mechanical reproduction of sound is more completely evidenced by his observations on the source of volume. "Volume or intensity," he says, "means amplitude of resulting sound waves, and depend upon the maximum velocity at which the diaphragm is called upon to move, also upon the amount of surface moving." How friction "depends purely upon the normal reaction between the surfaces," and at the same time is "independent of the area of contact", is indeed a puzzler. In my simple way, I fail to realise where friction arises between two surfaces in the absence of the contact which alone generates it. The poser which Mr. Sykes puts against the friction origin of sound is that the polished surface of Edison cylinders would be less loud than similar examples with a gritty surface. And he declares everybody knows this is not the case.

On the contrary, everybody knows that it is precisely the case that a record with a "gritty" surface is far more loud and equally unpleasant in the reproduction of the surface noises, as separated from the record

proper, than one possessing the ideal smoothness.

The reason why the record per se is not louder but less loud is because the surface area of the record in relation to the stylus is diminished, rather than increased, as Mr. Sykes assumes, by the "gritty" surface. If a perfectly smooth stylus of a given dimension passes over a perfectly rough surface, it is obvious that there will be a smaller area of contact between the two than when these contact surfaces are equally and perfectly smooth. The analogy, therefore, is not perfect.

How is it that a record has more volume when run at very high speed (apart from the raising of the pitch)? The amplitude of the vibration is no more, all other things are equal except that which results from the increased surface speed, and that is increased friction. As I have said before, the amplitude of the record

merely determines the energy of the thrust upon the reproducing diaphragm.

My views regarding the coincidence of movement between the recording and the reproducing diaphragm are held to be inconsistent, because I have admitted that a record cut by the agency of a diaphragm in the ordinary way can be reproduced without a diaphragm at all, by means of a valve operated by the record, and the friction supplied by compressed air. I never for a moment contended that there was any fidelity of expression (which is the point) in the reproduction by such means to the original. Where, then is the inconsistency?

I quite agree that so many separate points have arisen in this discussion that it is advisable to thresh out one at a time. Let Mr. Sykes, therefore, confine his remarks to one of the points in dispute in his next contribution.

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Mr. Willcox falls into error in supposing that I stated that the track of the Amberol is "practically the same" as the obsolete Concert record. What I said was that it is the same in appearance, though not in size. I contended that this similarity of undulating track was responsible alone for the more natural tone of the Amberol, and that the reproducing diaphragm of the Model H had nothing whatever to do with it. What I said, in other words, was that the length of the Amberol wave (of a given note) was in reality no greater

than the wave of the same note on the Standard record, but in being only half the width, it was relatively twice the length, and more nearly coincident in form with the concert record. Mr. Willcox wants to know what the wave lengths referred to are relative to. Why, to the width, to be sure, and the reason why the volume of the Amberol is so considerably reduced is because of the reduced width of its track, which correspondingly reduces the area of frictional contact between the record and the reproducing stylus. Mr. Willcox desires information on two other points, before I conclude.

(1) If the Concert record were made at a speed of 160 r.p.m. with a 200-thread cut instead of 100, would the tone be much superior with the former than the latter? No; except that it would possess

greater definition.

(2) Must a 200-thread record of necessity be better in tone than that of a 100-thread? No, a 100-thread Standard record made at 300 r.p.m. would have the tone of the Amberol and about three times the extent of volume.

Yours etc.,

1, Goswell Road, E.C.

Henry Seymour

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